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REMARKS

Claims 1, 3-7, 10, 11, 13, 14 and 16-23 are now in the application. Claims 1, 3-5, 10, 11, 13-14 and 19-23 are directed to the elected invention. Claims 6, 7 and 16-18 are drawn to non-elected invention and may be canceled by the Examiner upon the allowance of the claims directed to the elected invention.

Claim 1 has been amended to include recitations from original claim 2. Accordingly, claims 2, 8, 9, 12 and 15 have been canceled without prejudice or disclaimer. Basis for new claims 21-23 can be found in original claim 3. The amendments to the claims and new claims do not introduce any new matter.

Claim 1 was rejected under 35 USC 102(b) as being anticipated by U.S. Patent 6,312,812 to Hauser et al. The rejection of claim 1 has been rendered moot by the amendment of claim 1 to include recitations from claim 2. Claim 2 was not subject to this rejection. Likewise the rejection of Claims 3-5, 10, 13-14 and 20 under 35 U.S.C. 103(a) as being unpatentable over Hauser have been rendered moot by the amendment of claim 1 to include recitations from claim 2.

Claims 1-2 were rejected under 35 USC 102(e) as being anticipated by U.S. Patent 6,607,610 to Carey. Carey fails to anticipate claim 1 as amended. Carey suggests a compound having the general formula 1: $A\text{-}L\text{-}POH\text{-}(\text{-}L\text{-}A\text{-}L\text{-}POH\text{-})_x\text{-}L\text{-}A$ Formula 1, as a component of the composition for the treatment of metal substrates. In formula 1, "A" is an amine, "L" is an aldehyde, and "POH" is a phenolic compound. The above compound (a polyphenolamine of formula 1) is formed by the reaction of the amine, aldehyde, and phenolic compound. "A" in formula 1 is the unit formed after the reaction. Amines encompassed by "A" include allylamine, etc. (col. 2, 1.40-65, claim 1).

Namely, Carey merely suggests allylamine as an ingredient of the reaction product of the amine, aldehyde, and phenolic compound, and does not disclose it as a component of the composition. Therefore, the present invention as defined by amended claim 1 is not anticipated by Carey.

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The present invention as recited in amended claim 1 is a chemical conversion coating agent containing a polyvinylamine resin or a polyallylamine resin. When a surface of metal was treated with a conventionally known chemical conversion coating agent containing zirconium and the like, it was sometimes impossible to form a good chemical conversion coat in some metals. Particularly, there was a problem that when an iron material was treated with the above-mentioned chemical conversion coating agent, the adequate adhesion between a coating film to be formed by applying coating to the surface of the chemical conversion coat and the surface of metal, and the corrosion resistance after coating could not be attained.

In the present invention, it is possible to apply a good chemical conversion treatment to such diverse metals as iron, zinc and aluminum by adding a polyvinylamine resin or a polyallylamine resin to the agent containing at least one kind selected from the group consisting of zirconium, titanium and hafnium, and fluorine.

Namely, using a polyvinylamine resin or a polyallylamine resin is a very important point according to the present invention.

This fact is substantiated by Examples in the present specification. Agents of the present invention containing a polyvinylamine resin or a polyallylamine resin are shown in Examples 1-11 (Table 1). On the other hand, agents not containing a polyvinylamine resin or a polyallylamine resin are shown in Comparative Examples 1 and 3 (Table 1). Results of the evaluation test on Examples 1-11 and Comparative Examples 1 and 3 are shown in Table 1.

In Table 1, the results of secondary adhesion test (SDT) on Examples 1-11 are good. Namely, in Examples, good conversion coat could be formed on such diverse metals as iron, zinc and aluminum. On the other hand, the results of SDT on Comparative Examples 1 and 3 are bad. Therefore, it is shown that good conversion coat cannot be formed on the iron material by the agent not containing a polyvinylamine resin or a polyallylamine resin.

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As mentioned-above, Carey only discloses allylamine as an ingredient of polyphenolamine (the reaction product of the amine, aldehyde, and phenolic compound),and fails to disclose a polyvinylamine resin and a polyallylamine resin as a component of the composition.

Consequently, the suggestions of Carey do not provide the suggestion or motivation for achieving the present invention of amended claim 1.

Therefore, it is not obvious to one of ordinary skill in the art to achieve the present invention of amended claim 1 from the suggestions of Carey.

Concerning claims 3 and 21, it was pointed out in the office action the water-soluble polyphenolamine as taught by Carey (col. 3, lines 19-65), the polyphenolamine of Carey appears to have a molecular weight that overlaps the claimed molecular weight of 500 to 500,000."

However, Carey only discloses a molecular weight of polyphenolamine (the reaction product of the amine, aldehyde, and phenolic compound), and does not completely disclose that of a polyvinylamine resin or a polyallylamine resin. A very important preferred aspect of the present invention is using a polyvinylamine resin or a polyallylamine resin having molecular weight of 500 to 500,000 for applying good chemical conversion treatment to such diverse metals such as iron, zinc and aluminum (page 9, lines 4-11 of the specification). Therefore, the descriptions of Carey do not suggest achieving the present invention of claims 3 and 21.

Therefore, it is not obvious for one of ordinary skill in the art to achieve the present invention of claims 3 and 21 from the suggestions of Carey.

Concerning claim 22, as above-mentioned, Carey does not disclose a polyvinylamine resin having molecular weight of 500 to 500,000. Therefore, it is not obvious for one of ordinary skill in the art to achieve the present invention of claim 22 on basis of Carey for this same reason.

Concerning claim 23, as above-mentioned Carey only suggests allylamine as an ingredient of polyphenolamine (the reaction product of the amine, aldehyde, and phenolic

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compound, and does not disclose amine, aldehyde, and phenolic compound), and does not disclose it as a component of the composition.

Therefore, the descriptions of Carey do not suggest achieving the present invention of claim 23. Therefore, it is not obvious for one of ordinary skill in the art to achieve the present invention of claim 23 from the suggestions of Carey.

Claims 3-5, 8-14 and 19-20 were rejected under 35 U.S.C. 103(a) as being unpatentable over Carey. Claims 3-5, 8-14 and 19-20 are patentable over Carey for at least those reasons discussed above as to why claim 1 as amended is patentable thereover.

Claims 1 and 2 were also rejected under 35 USC 102(b) as being anticipated by WO 02/090619A2 as interpreted by its corresponding US Patent Application Publication 2004/0168748 to Hartwig. Hartwig does not anticipate amended claim 1.

Hartwig suggests a composition containing the addition product from hexafluorotitanic acid and/or hexafluorozirconic acid by an acid-base reaction with one or more organic bases (see claims 1 and 7). The organic base for the production of the addition products can include polyvinylamine(paragraph 0024). Accordingly, Hartwig merely suggests polyvinylamine as an ingredient of the reaction product of hexafluorotitanic and polyvinylamine, but not as a component of the agent (see page 5, lines 10-19 of the specification). Therefore Hartwig does not anticipate amended claim 1.

The provisional rejection of claims 1, 2, 5 and 12 for obviousness-type double patenting as being unpatentable over claims 1, 3 and 6 of co-pending application 10/743,390 has been overcome by the attached terminal disclaimer. The filing of a terminal disclaimer is not to be construed as an admission, estoppel or acquiescence. See *Quad Environmental Technology v. Union Sanitary District*, 20 USPQ2d 1392 (Fed. Cir. 1991) and *Ortho Pharmaceuticals Corp. v. Smith*, 22 USPQ2d 1119 (Fed. Cir. 1992).

In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to pass this application to issue.

In the event that the Examiner believes that another interview might serve to advance the prosecution of this application in any way, the undersigned attorney is available at the telephone number noted below.

Please charge any fee due with this response to our Deposit Account No. 22-0185, under Order No. 21581-00313-US from which the undersigned is authorized to draw.

Dated: 9-12-06

Respectfully submitted,

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